

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In re Matter of)	
)	
EDWARDS AND KELCEY, INC.)	RM-9830
)	
Petition for Modification of Section 101.145 ----)	
Interference to Geostationary Satellites from)	
Point-to-Point Microwave Systems)	
)	

MEMORANDUM OPINION AND ORDER

Adopted: January 24, 2007

Released: January 25, 2007

By the Deputy Chief, Wireless Telecommunications Bureau:

I. INTRODUCTION

In this *Memorandum Opinion and Order*, we deny a petition for rulemaking¹ filed by Edwards and Kelcey, Inc. ("E&K" or Petitioner),² seeking to amend Section 101.145 of the Commission's rules governing the processing of applications for point-to-point microwave licenses. For reasons discussed below, we deny the Petition.

II. BACKGROUND

1. The 5925 - 6875 MHz band is shared on a co-primary basis between point-to-point microwave systems and geostationary space stations in the fixed-satellite service respectively.³ In order to minimize the probability of harmful interference to geostationary space stations, Section 101.145 of the Commission's Rules prohibits directional transmitting antennas utilized by fixed microwave stations operating in the 5925-7075 MHz band from being aimed within 2 degrees of the geostationary satellite orbit.⁴ An exception to the 2 degree limitation may be made in unusual circumstances upon an applicant's showing, through a request for waiver, that: 1) there is no reasonable alternative to the transmission path proposed; 2) no harmful interference will occur to geostationary satellite systems; and 3) the maximum value of the equivalent isotropically radiated power (EIRP) does not exceed +47 dBW for any antenna beam directed within 0.5 degrees of the stationary satellite orbit, or +47 to +55 dBW on a

¹ See Petition for Rulemaking, (filed Nov. 17, 1999) (Petition).

² E&K is a consulting and engineering firm that provides design and regulatory support for public and private operators of point-to-point microwave systems licensed pursuant to Part 101 of our rules. Although E&K is not an FCC licensee, it has asked the Commission to accept its role in support of licensees as sufficient standing in this matter. Petition at 1.

³ 47 C.F.R. § 101.101.

⁴ 47 C.F.R. § 101.145.

linear decibel scale for any antenna beam directed between 0.5 degrees and 1.5 degrees of the stationary orbit.⁵

2. Generally, regulations governing the licensing of new microwave systems permit applicants to begin operating their systems pursuant to conditional authority immediately upon filing of the related license application.⁶ However, if the license application includes a waiver request, the system may not be activated until the Commission approves the waiver request and related application.⁷ Accordingly, because an applicant for a license to operate in the 5925 - 7075 MHz band must file a waiver request if it plans to use antennas pointed within 2 degrees of the orbit of a geostationary satellite, the applicant generally may not commence operation until the Commission has adjudicated its license application and associated waiver request.

3. On November 17, 1999, E&K filed a petition for rulemaking seeking modification or elimination of the waiver procedure in Section 101.145 set forth above. Comments on the Petition were due on April 7, 2000, and reply comments were due April 24, 2000.⁸ Alcatel, Harris, DMC, FWCC, UTC, Comsearch, AAR, and Pinnacle support E&K's proposal. COMSAT and PanAmSat express reservations about the change. HBO opposes the Petition.

4. E&K proposes that the Commission should either: 1) require a waiver request only if an application proposes to exceed the EIRP limits specified in Section 101.145; or 2) require only an exhibit noting that an antenna will point within two degrees of the orbital arc and certifying compliance with the power limits where the application complies with the stated EIRP limits. E&K contends that either of these simple changes does not sacrifice any continuing interference protection and will allow more timely system implementation for operations that fall within Section 101.145 but comply with the EIRP limits set forth in the rule. E&K argues that while the scope of the rule change it seeks is narrow, it will serve to "reduce application preparation-related expenditures, use Commission resources more efficiently, reduce unnecessary delays in FCC processing [of] certain applications, and facilitate more timely activation of new microwave systems."⁹

5. E&K and its supporters contend that the process of reviewing and granting a waiver can take several months.¹⁰ They claim that as licensees implement networks in shorter time frames, any delay becomes costly.¹¹ Proponents claim that the need for a waiver for even one link in a multi-link network can slow the activation of the entire network and hurt competition.¹² Petitioner argues that the waiver requirement is thus unnecessary and inefficient because such waiver requests, though routinely granted, take several months to process and thus delay the implementation of critical microwave systems.¹³ In

⁵ 47 C.F.R. § 101.145(b).

⁶ See 47 C.F.R. § 101.31(b) (granting applicants for new point-to-point microwave radio stations or modifications of existing stations authority to operate the proposed stations during the pendency of its application upon the filing of a properly completed application, if certain conditions are satisfied).

⁷ 47 C.F.R. § 101.31(b)(iii).

⁸ A list of comments, reply comments, and *ex parte* presentations is contained in the Appendix to this *Memorandum Opinion and Order*.

⁹ Petition at 1-2.

¹⁰ Petition at 4, Alcatel Comments at 6.

¹¹ Petition at 4.

¹² Petition at 5, Pinnacle Comments, Alcatel Comments, NSMA Comments, FWCC Comments, Harris Comments.

¹³ Petition at 4.

opposition, PanAmSat argues that as the Commission continues its streamlining efforts and as applications are increasingly processed using automated processing systems, the amount of time that applications remain pending at the FCC continues to shrink, thereby rendering the costs of the waiver application almost negligible.¹⁴ HBO argues that “[t]he need for more expeditious processing of waiver requests cannot be permitted to undermine the need to examine legitimate interference concerns.”¹⁵

6. E&K and the Petition’s supporters also argue that the interference concerns underlying the waiver requirements are based on old systems and therefore are, practically speaking, unjustified for current FS technologies.¹⁶ E&K asserts that the EIRP limits were established based on the high-powered analog microwave systems commonly used 25 years ago;¹⁷ and that the digital microwave systems commonly used today operate with transmitter power below the low range of the EIRP levels (47 dBW) of the FCC’s limit.¹⁸ Accordingly, E&K argues that waivers should only be required in those instances when an applicant proposes to exceed the EIRP specified in Section 101.145.¹⁹ PanAmSat is concerned that the proposed change would have a “deleterious effect on sharing these bands between terrestrial and space-based systems.”²⁰ It argues that although the proposed rule change would not significantly impact wideband or saturated analog carriers in the fixed satellite service (“FSS”), this may not be the case for narrowband digital carriers in the FSS.²¹ With such systems, the uplink EIRP may be in the low 40’s (dBW), and as satellite customers increasingly use their transponders in a multi-carrier mode with narrowband digital carriers, the potential for interference may be more substantial.²² COMSAT has observed at least one FS signal retransmitted through a geosynchronous satellite, and notes that new communication satellites have greater sensitivity and may be affected more significantly by potential interfering signals.²³

7. HBO argues that the changes requested in the petition effectively eliminate two of the three requirements for the FCC to allow C-band microwave antennas to point within two degrees of the geostationary arc.²⁴ HBO argues that by changing the test to look solely at power level of the transmission, as the petition implies, the FCC would be allowing potential interference with HBO and other systems using C-band satellite systems, even when alternative paths were available.²⁵ HBO similarly claims that the petition confuses a proposed EIRP level with a guarantee that no interference will occur.²⁶ HBO says that this position ignores the fact that satellite systems operate over different power levels, using different transmission and reception parameters and that different transmissions on

¹⁴ PanAmSat Reply Comments at 2.

¹⁵ HBO Comments at 5.

¹⁶ Petition at 5, Pinnacle Comments, Alcatel Comments, NSMA Comments, DMC Comments, AAR Comments.

¹⁷ Petition at 5.

¹⁸ Petition at 5.

¹⁹ Petition at 6.

²⁰ PanAmSat Reply Comments at 1.

²¹ PanAmSat Reply Comments at 2.

²² PanAmSat Reply Comments at 2.

²³ COMSAT Comments at 4.

²⁴ HBO Comments at 3.

²⁵ HBO Comments at 3.

²⁶ HBO Comments at 4.

satellite systems are more susceptible to interference.²⁷ Thus, HBO argues that the petition has larger ramifications than its supporters would like to admit.²⁸ Alcatel and NSMA respond by noting that the fixed service industry takes seriously its obligation to protect co-channel FSS users from harmful interference and that HBO has not provided any empirical data to prove that the proposed revision of 101.145 would lead to any FS interference.²⁹

III. DISCUSSION

8. The Petition before us seeks modification or elimination of the waiver procedure set forth in Section 101.145. We conclude that the Petition should be denied because, under current circumstances, there does not appear to be a substantial need for a rule change.

9. While E&K and its supporters contend that the processing time for waivers under Section 101.145 unnecessarily delays the operation of microwave systems, we note that we have taken steps to expedite our internal processing of such waivers. As a result, requests for waiver under Section 101.145 are processed at a significantly faster rate than they were processed at the time the Petition was filed. Accordingly, we believe that delays in processing time do not justify modification of this rule.

10. Furthermore, the Petition is deficient in that it alleges a need for rapid processing yet does not provide any specific examples of how licensees have been harmed by processing delays. Moreover, we note that although applicants affected by Section 101.145 may not begin operating immediately on conditional authority, such applicants may seek an STA to operate immediately pursuant to Section 1.931 of the Rules. Therefore, applicants do have some recourse if there is an urgent need to begin operating immediately. Because E&K has not established that it or other applicants have been harmed by the application of Section 101.145, it has not demonstrated a need for modification of this rule, especially where such modification could have a negative effect on interference protection of geostationary satellite systems.

11. Section 101.145 serves the important function of providing interference protection to geostationary satellites. Although E&K argues that the threat of interference is minimal due to the current low power levels utilized by microwave systems, satellite commenters raise concerns about the potential of the proposed rule changes to increase interference. No party has provided engineering studies or other supporting evidence to corroborate their claims. In light of our conclusion that there has not been an adequate showing that a rule change is necessary, we need not resolve the dispute between the parties. Furthermore, under E&K's proposal, an applicant would no longer be required to demonstrate that no reasonable alternative exists, or that its proposed operations will not cause harmful interference to geostationary satellites. Therefore, we deny the Petition.

IV. CONCLUSION AND ORDERING CLAUSES

12. We find, based on the circumstances presented, that E&K has not justified its proposed rule changes because it does not appear that there is a substantial need for the change at this time. Accordingly, we deny the Petition.

²⁷ HBO Comments at 4.

²⁸ HBO Comments at 4.

²⁹ Alcatel Reply Comments at 4, NSMA Reply Comments at 3-4.

13. ACCORDINGLY, IT IS ORDERED, pursuant to Section 4(i) of the Communications Act of 1934, as amended, and Section 1.401 of the Commission's Rules, 47 C.F.R. § 1.401, that the Petition for Rulemaking filed by Edwards and Kelcey, Inc. on November 17, 1999 IS DENIED.

14. These actions are taken under delegated authority pursuant to Sections 0.131 and 0.331 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Cathleen A. Massey
Deputy Chief, Wireless Telecommunications Bureau

APPENDIX**List of Commenters****Comments**

Alcatel USA, Inc. (Alcatel)

Association of American Railroads (AAR)

COMSAT Corporation (COMSAT)

Comsearch

Digital Microwave Corporation (DMC)

Fixed Wireless Communications Coalition (FWCC)

Harris Corporation-Microwave Communications Division (Harris)

Home Box Office (HBO)

Pinnacle Telecom Group, LLC (Pinnacle)

United Telecom Council (UTC)

Reply Comments

Alcatel USA, Inc.

National Spectrum Managers Association (NSMA)

PanAmSat Corporation (PanAmSat)

Ex Parte Comments

National Spectrum Managers Association